

5 WHAT IS CLAIMED IS:

1. An apparatus for cleaning a surface, the apparatus comprising a pump and an applicator connected to the pump through which one or more cleaning agents can be applied to the surface at an operating pressure that is about 600 PSI or less and an operating flow rate that is about 1 gal/min or less.
- 10 2. The apparatus of claim 1 wherein the cleaning agents are selected from the group consisting of a chemical cleaning agent, a biocide, a biostatic, solutions thereof and mixtures thereof.
3. The apparatus of claim 2 wherein the chemical cleaning agent includes a surfactant-based cleaning agent.
- 15 4. The apparatus of claim 2 wherein the chemical cleaning agent in solution form has a pH that ranges from about 2.0 to about 14.0.
5. The apparatus of claim 1 further comprising a mobile cart that is equipped with the pump, the cleaning agents and the applicator.
6. The apparatus of claim 5 wherein the cleaning agents are detachable from the  
20 mobile cart.
7. The apparatus of claim 5 further comprising a dilution unit attached to the mobile cart wherein the dilution unit is capable of preparing the cleaning agents in solution form prior to application to the surface.
8. A surface cleaning system comprising:  
25 a pump that operates at an operating pressure of about 600 PSI or less;

5 an applicator connected to the pump through which a fluid can flow at an operating flow rate that is about 1 gal/min or less;

a water supply that can be applied to a surface through the applicator at the operating pressure and the operating flow rate; and

a cleaning agent supply that can be applied to the surface through the applicator at the  
10 operating pressure and the operating flow rate.

9. The surface cleaning system of claim 8 further comprising a mobile cart that is equipped with the pump, the applicator, the water supply and the cleaning agent supply.

10. The surface cleaning system of claim 9 wherein the cleaning agent supply is detachably connected to the mobile cart.

15 11. The surface cleaning system of claim 8 wherein the water supply includes a water reservoir.

12. The surface cleaning system of claim 8 wherein the water supply is supplied by an in-line water connector through which water is provided from an external water source.

13. The surface cleaning system of claim 8 wherein the cleaning agent supply is  
20 selected from the group consisting of a chemical cleaning agent, a biocide, a biostatic, solutions thereof and mixtures thereof.

14. The surface cleaning system of claim 13 wherein the chemical cleaning agent includes a surfactant-based cleaning agent.

15. The surface cleaning system of claim 14 wherein the chemical cleaning agent in  
25 solution form is selected from the group consisting of an alkaline solution having a pH from

5 about 8.0 to about 12.5, a pH balanced solution having a pH from about 5.0 to about 10.0, an acidic solution having a pH ranging from about 2.0 to about 4.0, and mixtures thereof.

16. The surface cleaning system of claim 8 further comprising a dilution mechanism including a dilution unit capable of preparing the cleaning agent supply in solution form at a dilution ratio that ranges from about 1:4 to about 1:256.

10 17. A cleaning process, the cleaning process comprising the steps of:  
applying a chemical cleaning agent to a surface in need of cleaning at an operating pressure that is about 600 PSI or less; and  
rinsing the surface with water supplied at the operating pressure.

18. The cleaning process of claim 17 further comprising the step of applying a bio-  
15 cleaning agent to the surface subsequent to rinsing wherein the bio-cleaning agent is selected from the group consisting of a biocide, a biostatic, solutions thereof and mixtures thereof.

19. The cleaning process of claim 18 further comprising the step of diluting the chemical cleaning agent and the bio-cleaning agent to a solution form at a dilution factor that ranges from about 1:4 to about 1:256.

20 20. The cleaning process of claim 17 wherein the surface is cleaned at an operating flow rate of about 1 gal/min or less.

21. The cleaning process of claim 17 wherein the chemical cleaning agent includes a surfactant-based cleaning agent.

22. The cleaning process of claim 21 wherein the chemical cleaning agent is applied  
25 to the surface at a pH that ranges from about 2 to about 14.